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TECHNICAL NOTES

LAKE STATES FOREST EXPERIMENT STATION
U.S. DEPARTMENT OF AGRICULTURE · · FOREST SERVICE

No. 544

FOREST PLANTINGS IN NORTHERN LOWER MICHIGAN BY COUNTY

During the last 50 years two-thirds of a million acres have been planted to trees in 34 counties in northern Lower Michigan. Six of these counties have each had more than 30,000 acres planted; only nine have had less than 10,000 acres each.

These estimates were derived from a survey recently completed by the Lake States Forest Experiment Station, the Lower Michigan National Forest, the Michigan Department of Conservation, and the Consumers Power Company. One already published report, Technical Note No. 539, showed planting trends by decades. In that Note, as in this one, the figures given are for "acres planted," not "acres of successful plantations." Estimates of the latter will be given in a subsequent report.

Although forest plantings vary widely by counties, some patterns are apparent (fig. 1). Counties with high public ownership of forest land tend to have large plantation areas (table 1). Where soils are relatively productive for general farming as in Mecosta, Midland, and Arenac Counties, the area planted is below average. Generally, planting on private lands declines across the survey area from southwest to northeast.

Ottawa County has the largest acreage of private plantings; it is closely followed by Muskegon County. This is due to an expanding Christmas tree industry in the area. The major emphasis is on Scotch pine, preferred for Christmas trees.

The most extensively planted single species is red pine, accounting for 250,000 acres. Next in importance is red and jack pine, which are often planted in mixtures on public lands; this combination covers a quarter of the area planted. Although eastern white pine has decreased in popularity because of the twin hazards of blister rust and weevil damage, it still ranks as the third most important species. A phenomenal rise in the rate of planting Scotch pine has occurred during the last decade, almost entirely on private lands.

The major planting effort is now concentrated in the western part of the survey area. The six counties with the highest planting rates during the early fifties in order of importance are Wexford, Ottawa, Benzie, Newaygo, Missaukee, and Grand Traverse Counties.

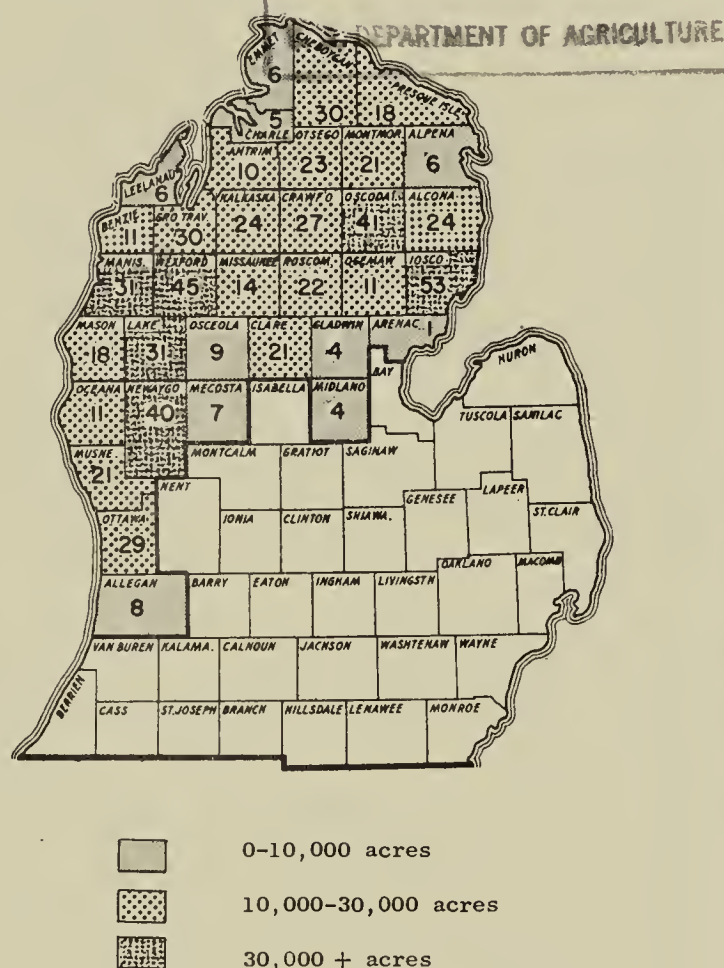


Figure 1.--Forest plantings by county, 1900-56.
The figures within each county indicate
total area planted in thousands of acres.

Table 1.--Forest plantings in northern Lower Michigan by county and owner, 1900-56

(In acres)					(In acres)				
County	Total	National forest	State forest	Private 1/	County	Total	National forest	State forest	Private 1/
Alcona	23,540	20,640	-	2,900	Mason	17,480	10,680	-	6,800
Allegan	7,800	-	2/	7,800	Mecosta	6,870	950	20	5,900
Alpena	5,990	-	4,790	1,200	Midland	4,030	-	30	4,000
Antrim	10,230	-	1,830	8,400	Missaukee	13,720	-	4,520	9,200
Arenac	1,340	-	440	900	Montmorency	21,000	-	19,200	1,800
Benzie	11,320	-	3,220	8,100	Muskegon	20,810	310	-	20,500
Charlevoix	5,160	-	2,460	2,700	Newaygo	40,490	29,290	-	11,200
Cheboygan	29,470	-	22,670	6,800	Oceana	11,200	5,800	-	5,400
Clare	20,720	-	16,720	4,000	Ogemaw	11,050	-	9,750	1,300
Crawford	26,890	4,650	21,040	1,200	Osceola	9,180	-	80	9,100
Emmet	5,560	-	2,960	2,600	Oscoda	41,460	33,110	5,750	2,600
Gladwin	4,420	-	2,420	2,000	Otsego	22,580	-	14,580	8,000
Grand Traverse	29,760	-	18,760	11,000	Ottawa	28,700	-	-	28,700
Iosco	53,190	51,680	10	1,500	Presque Isle	17,770	-	16,270	1,500
Kalkaska	24,120	-	18,620	5,500	Roscommon	22,010	-	21,610	400
Lake	31,290	28,790	800	1,700	Wexford	45,360	24,130	5,030	16,200
Leelanau	5,540	-	540	5,000					
Manistee	30,540	18,580	1,460	10,500	Total	660,590	228,610	215,580	216,400

1/ Estimated from shipment summaries of public nurseries on the basis of one thousand trees per acre. Shipments of fewer than 500 trees are not included. Includes plantings on county and school forests and other small public holdings.

2/ Excludes state forest plantings in Allegan County, for which records are not available.

OCTOBER 1958

ROBERT N. STONE, Forester

Table 2.--Forest plantings in northern Lower Michigan by county and species group, 1900-56

(In acres)											
County	Totals	White pine	Red pine	Jack pine	Scotch pine	White & red pine	Red & jack pine	White, red, & jack pine	Spruce	Misc. <u>1</u> / conifers	
Alcona	23,540	650	12,600	3,000	300	280	6,530	-	160	20	
Allegan	<u>2</u> / 7,800	950	2,110	830	2,490	10	-	-	990	420	
Alpena	5,990	1,700	460	110	260	1,120	1,670	30	250	390	
Antrim	10,230	900	4,050	1,340	3,020	-	320	-	340	260	
Arenac	1,340	50	780	300	130	-	-	-	50	30	
Benzie	11,320	1,210	5,760	1,860	1,630	-	390	-	290	180	
Charlevoix	5,160	1,600	1,570	700	100	40	590	320	160	80	
Cheboygan	29,470	3,500	4,990	500	570	1,510	12,240	4,910	240	1,010	
Clare	20,720	530	2,820	80	770	-	16,070	80	270	100	
Crawford	26,890	1,950	4,060	2,440	290	1,540	14,850	970	80	710	
Emmet	5,560	400	3,070	200	350	30	650	560	150	150	
Gladwin	4,420	230	1,060	490	100	-	700	1,460	350	30	
Grand Traverse	29,760	3,680	7,310	2,410	1,230	2,280	9,530	2,250	890	180	
Iosco	53,190	620	43,280	2,850	540	1,060	4,330	-	370	140	
Kalkaska	24,120	1,080	5,350	1,150	790	340	10,980	4,200	160	70	
Lake	31,290	2,360	11,850	6,110	90	3,940	6,800	-	80	60	
Leelanau	5,540	1,020	3,030	390	610	-	160	-	240	90	
Manistee	30,540	3,640	12,060	5,860	1,310	3,880	3,210	-	290	290	
Mason	17,480	1,080	7,100	2,460	1,760	1,680	2,880	-	300	220	
Mecosta	6,870	940	3,410	250	1,010	190	270	-	530	270	
Midland	4,030	880	1,580	780	450	-	10	-	200	130	
Missaukee	13,720	280	7,460	1,550	1,350	-	1,820	390	740	130	
Montmorency	21,000	960	1,940	1,740	360	990	14,460	350	140	60	
Muskegon	20,810	3,640	7,760	670	6,040	-	-	-	1,470	1,230	
Newaygo	40,490	5,230	15,350	3,190	2,650	5,210	7,450	-	370	1,040	
Oceana	11,200	1,950	6,380	970	560	400	20	-	550	370	
Ogemaw	11,050	1,290	850	600	170	450	6,500	650	100	440	
Osceola	9,180	500	6,050	520	1,530	-	-	-	250	330	
Oscoda	41,460	1,270	24,710	7,250	180	610	6,510	190	720	20	
Otsego	22,580	1,970	7,000	1,150	1,360	2,580	7,710	520	170	120	
Ottawa	28,700	3,540	7,500	2,190	11,830	-	-	-	1,970	1,670	
Presque Isle	17,770	740	850	350	570	1,090	13,220	440	170	340	
Roscommon	22,010	3,860	440	1,020	90	1,020	11,450	2,970	80	1,080	
Wexford	45,360	860	25,680	6,720	2,090	1,690	6,890	230	920	280	
Total	660,590	55,060	250,270	62,030	46,580	31,940	168,210	20,520	14,040	11,940	

1/ Includes miscellaneous conifers such as ponderosa pine, pitch pine, Austrian pine, Douglas-fir, balsam fir, European larch, and a small acreage of unusual mixtures. Hardwood plantings are not included.

2/ Excludes state forest plantings in Allegan County, for which records are not available.